

IN THE SPECIFICATION

Please replace the paragraph beginning at page 6, line 6 of the specification as originally filed with the following paragraph:

IP traffic may be transported directly over the communication system. Typically, power line communication systems (PLCs) are connection-oriented, while IP is a connectionless protocol. IP traffic does not expect a dedicated connection in the lower layers of the communication system and therefore the data to be transported must be translated into connection oriented formats. In this case, the IP protocol stack transports its IP packets across the IP Service Access Point (IP-SAP). This interface uses the transport layer to application interface layer primitives to communicate the user data and transmission status over the IP-SAP.

Please replace the paragraph beginning at page 6, line 14 of the specification as originally filed with the following paragraph:

As mentioned above, IP is a connectionless protocol while PLCs are inherently connection oriented. The IP protocol stack can rely on the transport layer to setup connections to the destinations devices as needed by requesting this service when it binds to the PLC-AV IP-SAP. The process of binding is that of informing the CM that an application is attaching to a particular transport layer port. Some traffic types may have a default transport layer port associated with them. AV and AV/C traffic do not typically have default ports, as there could be several of these streams in a device. The application typically requests the port number to which the stream binds. Alternatively, the CM could assign a port.

Please replace the paragraph beginning at page 6, line 23 of the specification as originally filed with the following paragraph:

Applications still have the ability to control the routing of IP traffic over specific connections (with QoS) by configuring the transport layer classifier to detect the IP packets of interest. The classifier will then deliver these packets to the proper connection.

Please replace the paragraph beginning at page 13, line 12 of the specification as originally filed with the following paragraph:

As with the AV Classifier, the AVC Classifier allows [[only]] for only one type of classifier parameter in each rule. That classifier parameter is the Destination MAC Address. When a packet is supplied to the AVC Classifier over the transport layer Port, its transport layer Port number and Destination MAC address determine the CID over which it will be sent.

Please replace the paragraph beginning at page 20, line 21 of the specification as originally filed with the following paragraph:

The general process of connection establishment is shown in Figure 5. At 90 the determination is made that a connection is needed. This may occur by a specific request from an application, or by the connection manager determining that no match exists in the classification process. The connection type is generated at 102 and the connection specification is generated at 104. ~~This~~ These key parameters for the connection are discussed in detail below.

Please replace the paragraph beginning at page 20, line 27 of the specification as originally filed with the following paragraph:

If no connection already exists, the transport system may be generated automatically by the transport system. The transport system generates the [[CPEC]] CSPEC and CTYPE and then establishes the connection. The generation of CSPEC is based upon information and/or fields contained within the protocols encapsulating the application data, as well as the SAP used by the application. The transport layer may also monitor the particular application data stream to determine QoS requirements and later modifying it, even if the application data stream is active.

Please replace the paragraph beginning at page 22, line 8 of the specification as originally filed with the following paragraph:

Figure 6c shows an embodiment of a connection establishment for a PAGS connection. The triggering event again starts the CM and BM primitive exchanges, except that the bearer set up is now non-negotiable. After the two CMs request the connection and respond, the CM on the non-central coordinator device, in this case Device 1, requests a bandwidth allocation (CB_BANDWIDTH_REQ). The bearer is then configured with the required bandwidth. Any messages arriving in the Upper MAC (UMAC) of Device 1 is buffered there until the bearer is granted. Once the bearer is granted, the message is sent. The CM on Device 2, also a non-central coordinator device, then requests bandwidth allocation as well. The bearer is then configured for device 2. Any buffered messages are then sent from Device 2 once the bearer is configured and the process continues for user data transport. This procedure, referred to here as a request-grant procedure is notably different from the continuous grant procedure for CGS[[>]].

Please replace the paragraph beginning at page 24, line 16 of the specification as originally filed with the following paragraph:

On the transmit side, if the traffic attributes of the connection are not compliant at 182, the monitoring system must inform the CM at 192 which then communicates with the application and either terminates the application flow at 198 or renegotiates a new CSPEC with the application and the Central Coordinator at 199 and then adjusts at 194. The monitoring system must also keep track of the outgoing traffic from the transport Layer at 196 and compute an estimate of the average, maximum and minimum rate of packet outflow. If these values do not lie within the range of the max./min data rate parameters in CSPEC, the CM may negotiate with the CC for a new allocation at 200. This is only a rough estimate since the buffering of transport frames in the MAC might contribute to additional delay. [[V]]

Please replace the paragraph beginning at page 24, line 25 of the specification as originally filed with the following paragraph:

In addition to the above methods, the monitoring system can measure the amount of time a ~~Connection~~ connection remains inactive, where no packets are transmitted from the transport layer on a particular CID. If the Inactivity Interval is defined in the CSPEC, the monitoring system may inform the CM and the CM may proceed to teardown the particular connection, communicating with the CC and possibly, the application.